

**MINUTES
of the
SECOND MEETING
of the
DROUGHT SUBCOMMITTEE**

**July 24, 2013
Clovis Civic Center, Clovis**

The second meeting of the Drought Subcommittee of the Water and Natural Resources Committee was called to order on July 24, 2013 at 12:25 p.m. by Senator Joseph Cervantes, chair, in the Clovis Civic Center in Clovis.

Present

Sen. Joseph Cervantes, Chair
Rep. Phillip M. Archuleta
Rep. Rodolpho "Rudy" S. Martinez
Rep. Tomás E. Salazar
Sen. Peter Wirth
Sen. Pat Woods

Absent

Rep. Brian F. Egolf, Jr., Vice Chair
Sen. Steven P. Neville
Sen. John Arthur Smith

Advisory Members

Sen. Carlos R. Cisneros
Sen. Stuart Ingle
Rep. Larry A. Larrañaga
Sen. Mary Kay Papen

Rep. Cathrynn N. Brown
Rep. Don L. Tripp
Rep. Bob Wooley

Guest Legislators

Rep. Sharon Clahchischilliage
Sen. Lee S. Cotter
Rep. Anna M. Crook
Rep. Nora Espinoza
Sen. Ron Griggs
Sen. Benny Shendo, Jr.
Rep. Jeff Steinborn

Staff

Jon Boller, Legislative Council Service (LCS)
Gordon Meeks, LCS
Jeret Fleetwood, LCS

Guests

The guest list is in the original meeting file.

Handouts

Handouts and other written testimony can be found in the meeting file or on the LCS web site.

Wednesday, July 24

Senator Cervantes began the meeting by having members of the subcommittee introduce themselves.

Senator Cervantes also provided the subcommittee with a brief history of the Water and Natural Resources Committee, the 2008 Adjudications Subcommittee and the Drought Subcommittee.

Drought Update, Historical Perspective and Short- and Long-Term Outlook

Chuck Jones, a meteorologist with the National Weather Service and member of the Drought Task Force Monitoring Work Group, reported on drought conditions in New Mexico. He explained that New Mexico, like most western states, experienced below-normal precipitation in June 2013 and that the statewide average precipitation totals for January to June are about 44 percent of normal, though in the central valley and southern deserts, it is only 24 percent and 27 percent of normal, respectively. Mr. Jones went on to note that the past 24 months and 36 months are the driest two- and three-year stretches on record, and that the past 48 months and 60 months are among the 10 driest three- and five-year periods on record. Mr. Jones also indicated that while there has been a slight change in conditions since June, the entire state is still classified as under moderate or worse drought; nearly 99 percent is in severe drought status; and 86 percent of New Mexico is in extreme or exceptional drought. As for the extended weather outlook, he said that the model consensus of the El Niño–Southern Oscillation supports neutral conditions into the autumn, which means that the precipitation outlook for August through October should be at or above normal, while the temperature outlook calls for warmer-than-average temperatures.

Sam Fernald, director, Water Resources Research Institute (WRRI) at New Mexico State University, also provided the subcommittee with testimony regarding the drought. He explained that there are a number of indicators of drought, such as snowpack, that were significantly below normal in 2012 and 2013. Mr. Fernald also noted various hydrologic indicators of drought, such as river flows and when they peak. For example, he said that Rio Grande flows peaked in March, which is extremely early, and that even then, peak flows were at a somewhat low volume. Likewise, low reservoir and ground water levels throughout the state indicate the severity of the current drought, he said. Mr. Fernald observed that 1979 through 2001 were some of the wettest years since prehistoric times, as evidenced by tree-ring analysis. He also pointed out that the same analysis shows that some historic droughts in the area have been much more severe, sometimes lasting 50 to 75 years. Mr. Fernald said that climate forecasts for the near future call for increasing temperatures, which could increase evaporation rates markedly.

Questions and comments from the subcommittee included the following:

- the effect of rising temperatures on evaporation of storage water;
- the difference between El Niño and La Niña weather patterns and the lack of signals that indicate which pattern might occur in the next year;
- normal monsoon weather patterns and reverse monsoon patterns;
- the unusual nature of a storm that began in the mid-Atlantic states and moved from east to west, eventually dropping some moisture on New Mexico;
- there is no way to predict how long any particular drought will last;
- while Clovis had some success with cloud seeding in the 1990s, Texas has a project in place but has not had the right kind of clouds for seeding;
- it is difficult to develop temperature and precipitation outlooks for anything longer than the short term with very much accuracy;
- the WRRI is conducting a study regarding water loss due to evaporation and its effect on water storage;
- weather patterns around the world generally have to be in balance, so somewhere in the world there may be a place experiencing wetter-than-normal weather;
- tree-ring analysis is fairly well-accepted science, but it does not indicate whether the state is in a short- or long-term drought;
- if New Mexico is in the beginning of a 75- or 100-year drought, it should plan for the worst possible scenario;
- Caballo Lake is at "dead pool" status, meaning no more water can be moved from it, while Elephant Butte Lake is at about five percent of capacity; and
- New Mexico has the lowest percent of reservoir storage in the United States at the moment, with many reservoirs at less than 13 percent capacity, and all are below 50 percent.

Planning for Projected Impacts of Drought and the Effects of Climate Change — the SECURE Water Act and WaterSMART Program

Dagmar Llewellyn, a hydrologist for the Bureau of Reclamation (BOR), briefed the subcommittee on several programs administered by the BOR that address water supply and demand issues. She began by discussing the federal SECURE Water Act, which authorizes federal water and science agencies to work together with state and local water managers to plan for climate change and other threats to water supplies and to take action to secure those water resources for communities, economies and ecosystems. Ms. Llewellyn noted that the SECURE Water Act is implemented through the WaterSMART Program, a program established by order of Secretary of the Interior Ken Salazar to provide federal leadership and assistance on the efficient use of water. The program also coordinates the water conservation activities of the various Department of the Interior agencies, administers grants and conducts basin study programs. Ms. Llewellyn went on to discuss the Basin Study Program in more detail, noting that it directs the secretary of the interior to establish a climate change adaptation program to assess risks to water supply, analyze impacts of changes in water supply on a variety of demands and develop mitigation strategies in consultation with non-federal participants. She noted that basin studies allow the BOR to collaborate with non-federal partners to evaluate current and future

water supply and demand, including state-of-the-art projections of future supply, analysis of the adequacy of existing water supplies, development of options to improve operations and trade-off analyses of the options identified. Ms. Llewellyn noted that funded basin studies involving New Mexico include the Pecos River, Santa Fe River and Colorado River basins. Ms. Llewellyn also described the Water and Energy Efficiency Grants, the Water Reclamation and Reuse Program and the Cooperative Watershed Management Program, noting that the Arch Hurley Conservancy District, Carlsbad Irrigation District (CID) and Albuquerque-Bernalillo County Water Utility Authority have received funding from the BOR for projects under these programs.

Questions and comments from the subcommittee included the following:

- that basin studies are competitive, so there is some risk in appropriating money for one and not being selected for it;
- that basin studies can be any scale, from small to multi-state; and
- that deadlines for applications vary, but a letter of interest by December is typical.

Legislation Addressing Drought Management from the 2000s and Implementing Active Water Resource Management

Scott Verhines, state engineer, and Amy Haas, general counsel, Interstate Stream Commission (ISC), reviewed several legislative initiatives on water issues from the past decade that were designed to better plan for drought and administer water in the state. Ms. Haas began by discussing the strategic water reserve and state and regional water planning. She explained that the strategic water reserve uses leased, purchased or donated water and may be used only for compact deliveries and to benefit endangered species. Ms. Haas noted that the state water plan was created by statute in 2003 and that two requirements of the statute relate to drought: one that mandates a drought management plan and another that requires the state to collaborate with the state's national laboratories to address water challenges. The creation of the Drought Task Force in 2003 was in accordance with the requirements of the drought management plan, and the task force was reactivated two years ago in response to the current drought. She said that the ISC is currently updating the plan to include an overview of water supply and demand challenges and federal, state and local collaborative opportunities on water issues, including infrastructure needs. The regional water plans grew out of litigation with Texas in the 1980s, she explained, which made it evident that New Mexico had to actively plan for its water future by demonstrating its need for water supplies. These plans, which have been developed by all 16 planning regions in the state, must answer three questions, Ms. Haas explained: 1) what existing water supplies are in the regions; 2) what future demand will be; and 3) how to close the gap between the two. These plans also need to be updated, she noted.

Mr. Verhines discussed the Water Trust Board, pointing out that the board was created to implement the state water plan and that it prioritizes projects that are identified in regional water plans. He noted that he wants to work on how the board can implement the regional water plans. He also discussed the Ground Water Storage and Recovery Act, which allows for underground storage of surface water during times of surplus to be available during shortages, noting that only Alamogordo and Albuquerque are currently pursuing such projects.

Mr. Verhines went on to discuss active water resource management (AWRM), which was passed by the legislature in 2003 and is now being implemented after years of litigation. He said that AWRM is a tool that will allow the Office of the State Engineer (OSE) to administer water through two paths: administering by priority using the best information available; and alternative administration, which would not necessarily cut off use by junior water rights holders in times of shortage but instead would rely on negotiations and cooperation among users. For example, Mr. Verhines discussed an issue involving water use by acequias near the confluence of the Chama River and the Rio Grande, which acequias hold some of the oldest water rights in the state. He explained that instead of cutting off use by junior rights holders upstream, all of the users have agreed to use a rotation scheme that appears to be working.

Questions and comments from the subcommittee included the following:

- the possibility still exists for a priority call on the Chama River;
- alternative administration does not require unanimous agreement by all parties, but it is desirable;
- whether the priority administration system really works and how some other western states have addressed their water issues;
- AWRM history and basics, such as water rights transfers, monitoring and metering of diversions and the seven basins that the OSE has applied it to, plus the highest priority basins for implementation of AWRM;
- priority administration means junior water rights holders' use is curtailed until senior rights holders' allotments are satisfied;
- the concept of a futile call;
- data that show it could take five years after curtailing junior ground water users on the Pecos River before senior users in the CID began to receive more water;
- some San Juan/Chama water for Albuquerque is stored in Heron Lake;
- tribal entities are generally the senior water rights holders in a basin;
- the BOR stores some tribal water in El Vado Lake;
- the OSE has identified a number of critical management areas across the state;
- water rights generally cannot be transferred into critical management areas but can usually be transferred out, depending on the rules in place for that area;
- permits have been issued for new domestic wells in Dona Ana County;
- repealing AWRM is an invitation for more litigation;
- most of the work on developing draft rules for AWRM is done; and
- the OSE sometimes gets complaints of and investigates domestic wells being used for agriculture.

Update on the Pecos River Priority Call

Mr. Verhines provided the subcommittee with a brief history of the Pecos River Settlement Agreement, explaining that in order to ensure that compact delivery obligations are met, the state purchased significant amounts of land and water rights to retire, while other water users on the river reached an agreement on how best to distribute the remaining water. He pointed out that while the state is still meeting its Pecos River Compact delivery requirements to

Texas, pumping targets to supply downstream irrigators in New Mexico have not been met in the past couple of years and will not be met in 2013, resulting in water shortages for irrigators on the Pecos River, particularly those in the CID, one of the more senior water rights holders on the river. Recognizing this shortfall, the CID's board invoked a limited priority call under the Pecos River Settlement Agreement.

Aaron Balok, Pecos Valley Artesian Conservancy District, explained that there are no easy answers to the water shortages faced by all users on the Pecos River. He pointed out that it was difficult to reach the requirements of the settlement in the first place, and that while much of the settlement does work, some aspects of it could work better. Mr. Balok also said that the severity of the drought is a big factor in the water issues in the area.

Dudley Jones, CID manager, agreed that a lot of work had gone into the initial settlement but that the CID deliveries are down to four-tenths of an acre-foot this year. He explained that the last tool available to the CID to protect its farmers is to issue a priority call. Mr. Jones pointed out that the call is not a full priority call and that all the CID is asking for is 50,000 acre-feet. He also acknowledged that a full basin call would likely undo the whole settlement.

Mr. Verhines and Greg Lewis, OSE, explained that with invocation of the call by the CID, the OSE began developing a list of all of the junior and senior users in the basin. They noted that the next two steps are to update the modeling for the basin, contemplating several "what if" scenarios, and to expedite implementation of AWRM rules in the basin. Mr. Verhines and Mr. Lewis also indicated that the OSE had engaged all five parties to the settlement and have begun holding meetings to try to develop solutions that work within the confines of the settlement.

Questions and comments from the subcommittee included the following:

- a priority call has been made, but not outside of the settlement;
- even a full basin call would not likely net the 50,000 acre-feet of water that the CID is seeking;
- the state bought water rights in the area and is pumping water into the river, but the river is so low that even pumping at the maximum allowable volume would not net the water requested by the CID this year;
- CID farmers are not receiving the amount of water they thought they would get when they agreed to the settlement;
- the economic impacts of a priority call;
- none of the settlement parties wants to see the settlement unravel; instead, they just want to modify it;
- the connection between surface water and ground water and the delayed effect on river flows from curtailing ground water pumping;
- implications of the settlement unraveling and a priority call of the entire Pecos River Basin;
- the current situation may be an example of why strict priority administration will not

- always work, at least without catastrophic consequences;
- problems with the futile call concept and the idea that in the long run, no call is entirely futile; i.e., it may be futile with respect to delivery of water, but it may get junior users to the table;
 - the solution to the issue likely has to come in the form of money, a curtailment of junior users or a negotiated settlement;
 - among AWRM's mechanisms are expedited water transfers and agreements between senior and junior water rights users to deal with water shortages;
 - if this issue goes back to court, everyone will be subject to the court's interpretation;
 - a call could affect all cities and villages that are in the Pecos River Basin, such as Cloudcroft and Ruidoso; and
 - the notion that, through water licensing and a market-based economy, the problem will eventually correct itself if the state stops spending money and allows the market to function.

There being no further business, the subcommittee adjourned at 5:20 p.m.